Advanced COMINT and COMJAM Solutions for Unmanned Aerial Systems (UAS)

Technical Specifications – COMJAM

- Frequency band: 30-500 MHz (option 30- 3000MHz)
- Jamming Modulation: CW, FM
- Jamming Modes:
- Manual – wide band
- Modulation Source:
- Tone – 1KHz
- Noise – White noise with variable bandwidth
- Azimuth coverage: 360°
- Power consumption: <750 W
- Weight: <35 kg

Technical Specifications – COMINT

- Frequency band: 30-1200MHz (option 30 to 3000MHz)
- Type of detected signals: FM, WFM, NFM, AM, CW, SSB
- Signal bandwidth: 16 filters, 100 Hz to 340 kHz
- Polarization: vertical
- DF accuracy: 3° RMS typical
- Azimuth coverage: 360°
- Elevation coverage:
- Upwards: 2° to 15° below horizon at nominal accuracy
- 15° to 40° below horizon, degraded performance
- Power consumption: <250 W
- Weight: <35 kg

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Advanced COMINT and COMJAM Solutions for Unmanned Aerial Systems (UAS)

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- Modular and customizable digital receivers with interconnected components
- Lightweight, high speed, and extremely accurate
- Arena build-up and geo-location
- Monitoring, searching, classifying, intercepting and selective jamming

THE CHALLENGE
A changing combat environment, characterized by asymmetric low intensity conflict in densely populated areas, demands new solutions and a fresh approach. Modern communications signals pose a great challenge to airborne COMINT and COMJAM systems. Intelligence gathering, analysis, and dissemination of information, combined with the ability to jam hostile communications to neutralize a variety of threats are critical necessities today.

THE ANSWER – ELISRA'S SKYFIX and SKYJAM families for UAS

Elisra provides COMINT, COMINT/DF & COMJAM capabilities to tackle the range of airborne communications systems being used today including conventional, cellular, and satellite. The company offers UAV specific COMINT, COMINT/DF & COMJAM systems that are conceived as modular building blocks able to fit any UAV on the market. These solutions meet the requirements of any EW/SIGINT payload, offering tactical intelligence reception in real time, over wide areas both rural and urban.

The company's wideband receivers boast a wide instantaneous receiving bandwidth, and are designed with a very high dynamic range and a built in modular capability enabling an ultra wideband reception. As part of its myriad attributes and advantages, this unique design makes possible, arena build-up, geo-location, searching/monitoring/classification and selective jamming.

AIRBORNE COMINT & COMINT DF SYSTEMS FOR UAS

SKYFIX and SKYFIX DF
SKYFIX is a compact, lightweight, high precision COMINT and COMINT/DF system, covering the 30MHz – 3GHz frequency band. A fully featured COMINT/DF system, SKYFIX DF uses a correlative interferometer technique and wide aperture high precision antenna array, providing excellent DF accuracy, combined with fast DOA integration time. Utilizing Elisra's TSR compact wideband multipurpose receivers, SKYFIX DF enables monitoring of selected transmissions, while simultaneously performing spectrum scan and DF calculations. SKYFIX DF, like all of Elisra's advanced COMINT/DF systems, uses Windows operating system and features advanced intuitive MMI, including on-line help.

Highly modular, SKYFIX DF's capabilities include signal classification and demodulation, Digital Audio Recording, multiple channel monitoring and various other options.

SKYFIX – Cellular phone surveillance and location
Elisra's SKYFIX Cellular system is capable of monitoring, recording, and transmitting GSM phone communications (both conversations and SMS). SKYFIX has source phone location capability and the ability to transmit gathered intelligence information to a variety of sources on the ground with the use of data links. Handling few conversations in parallel, the system's cellular phone configuration is capable of locating and blocking incoming and outgoing calls as well as impersonating a cellular phone user with all of its functions including SMS transmissions.

SKYFIX – Satellite phone surveillance and location
With wide coverage reception of satellite communications transmissions, SKYFIX is unique in its ability to gather intelligence in remote areas in real time with satellite phones transmitting from the air. Its airborne capabilities ensure soldiers' safety by maintaining safe distance from the transmitting source while pinpointing precise location. The system accommodates a variety of satellite telephones with Iridium and Turaya networks.

AIRBORNE COMJAM PAYLOAD FOR UAS

SKYJAM UAVs
SKYJAM, is a battle proven, modular, flexible, standalone, future-ready configuration of customizable, interoperable and interconnected airborne COMJAM payload components for UAS. S.O.F approved, the system manages multiple frequency sub-bands, predefined threats list, and priority jamming with automatic or manual operation.

Deployed as a stand-alone configuration or integrated with additional Elisra EW support systems, SKYJAM can be mounted on a variety of airborne platforms as well as offer the ideal solution for forward battlefield areas. User friendly, SKYJAM's modular systems span the full frequency band, from VHF to UHF. Customers can select systems operating over a single VHF/UHF band, or a solution which covers multiple bands. Working together with our customers, we specify and deliver the best solution for every chosen scenario.